



Construction Schedule for Baseline and Hybrid A' Configuration

5th September, 2014
J-POWER

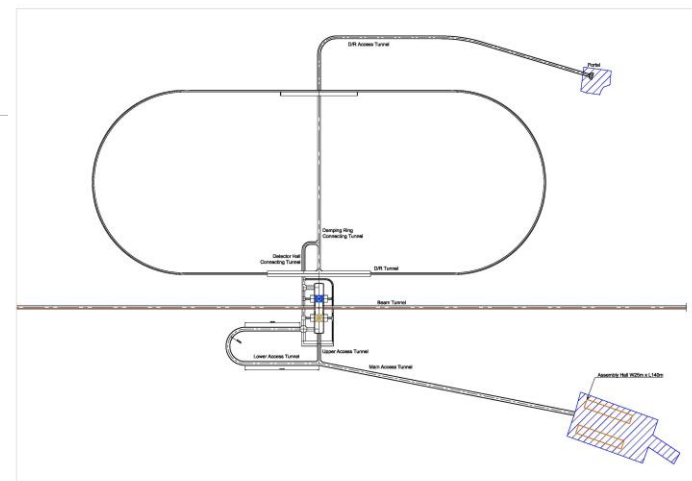
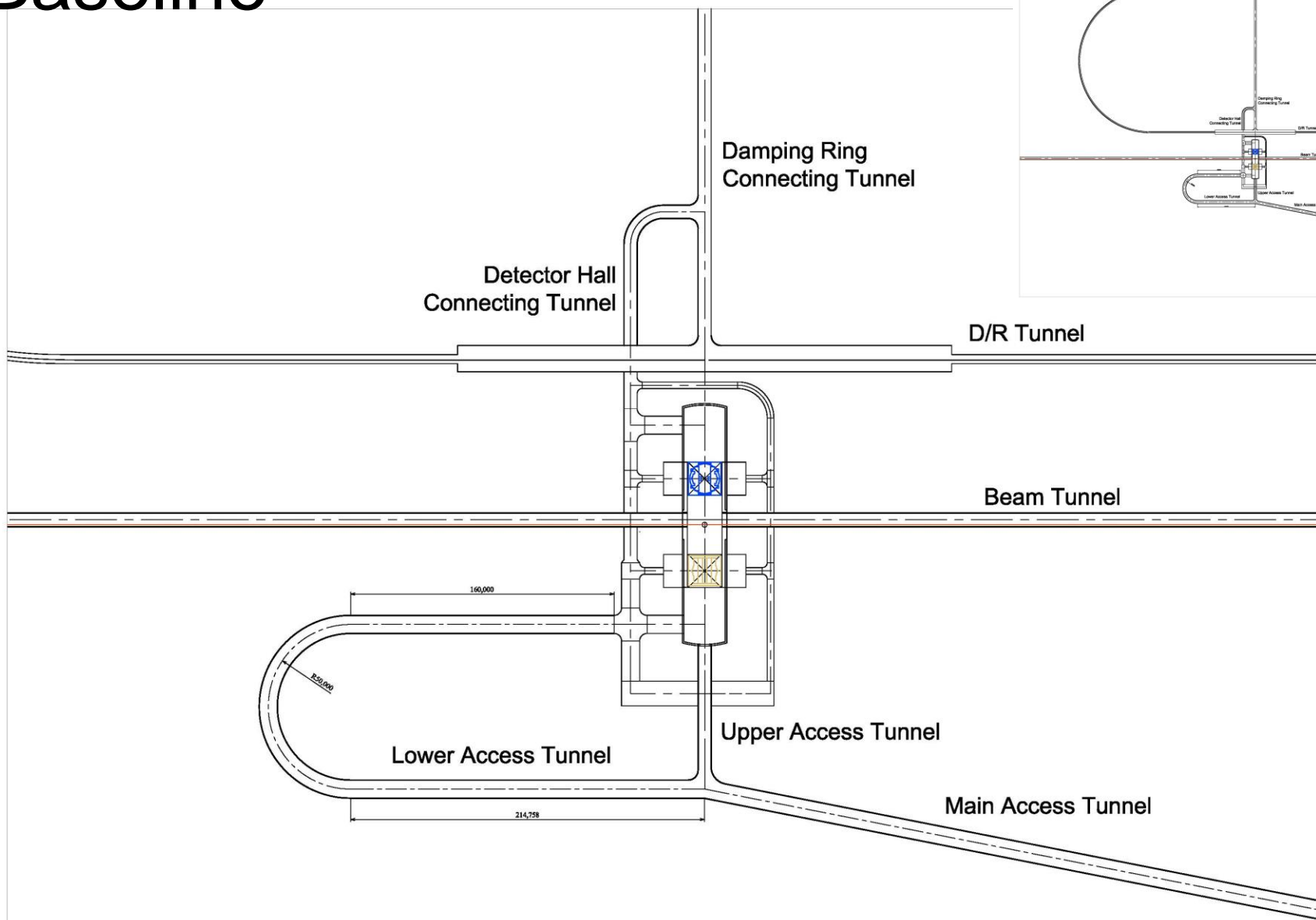


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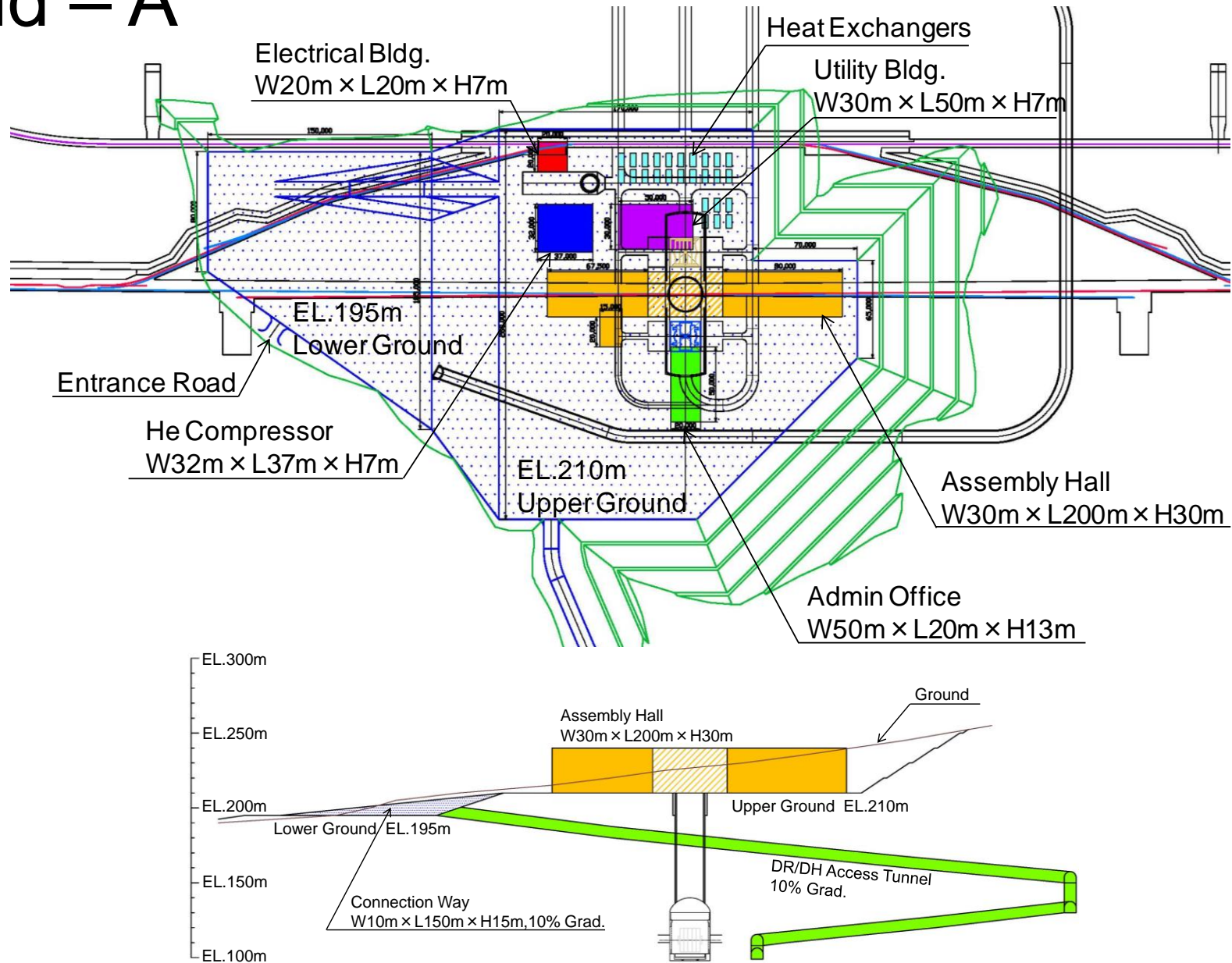


Baseline





Hybrid – A'

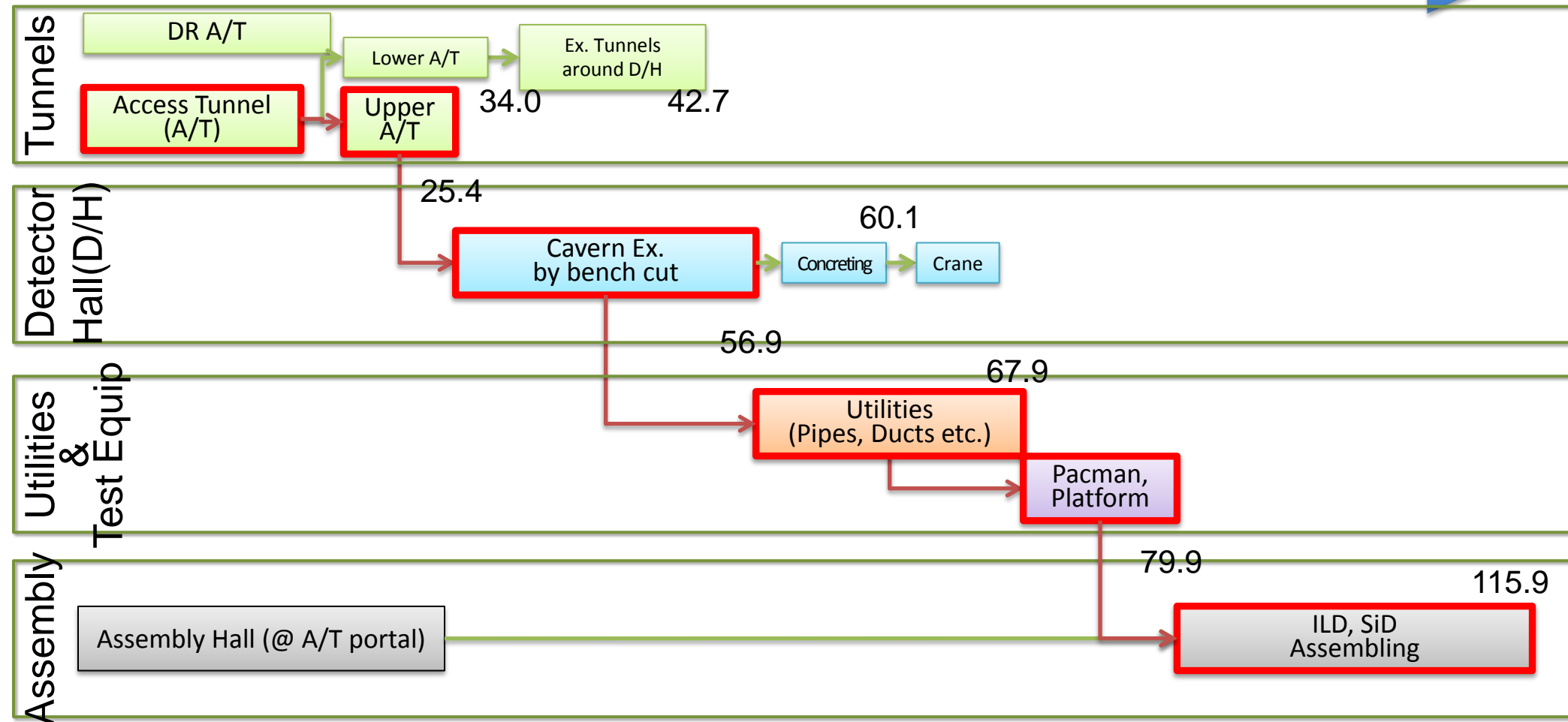




Outline of the Detector Hall (D/H) construction procedure

- Baseline Design -

Time-line (const. period: 115.9 months)

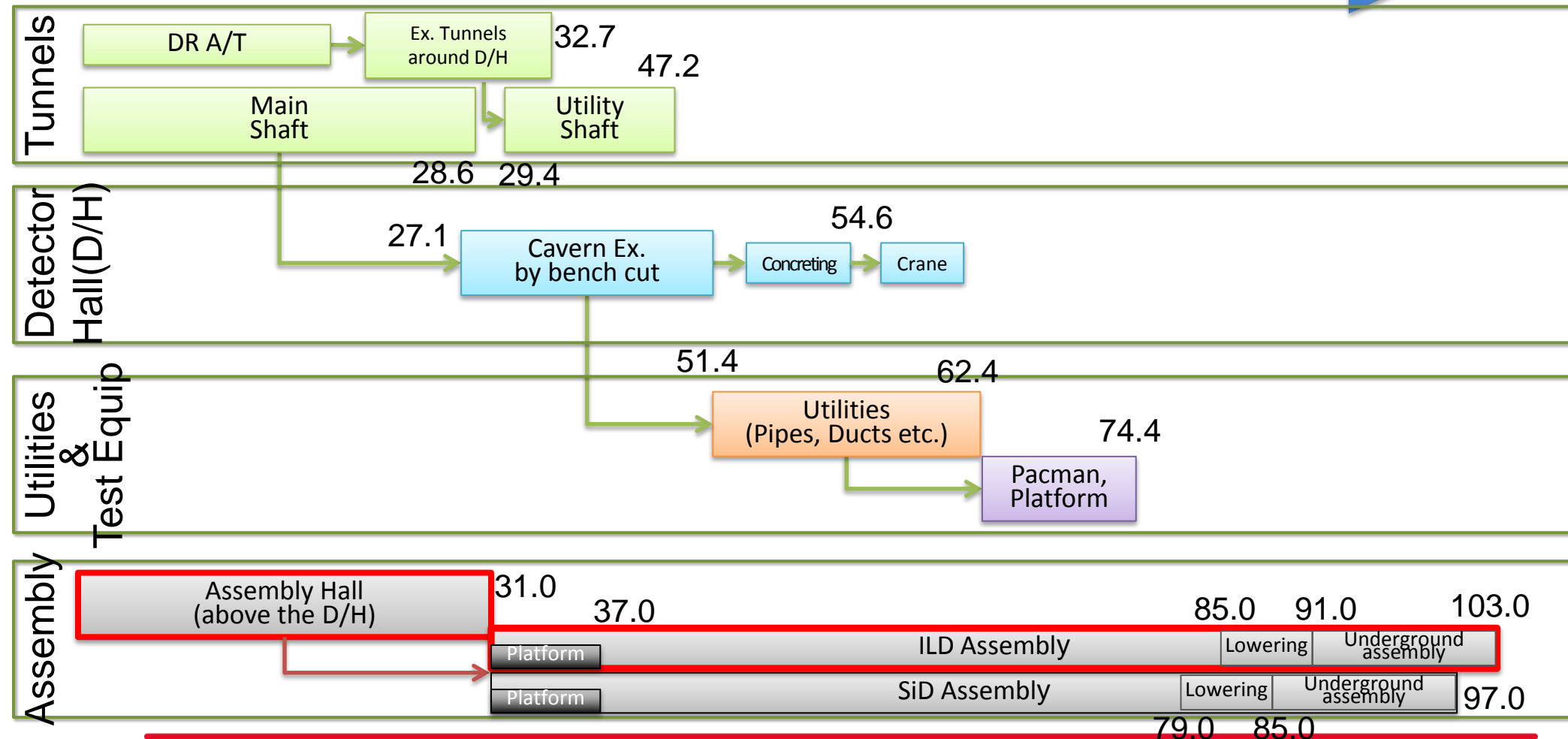




Outline of the Detector Hall (D/H) construction procedure

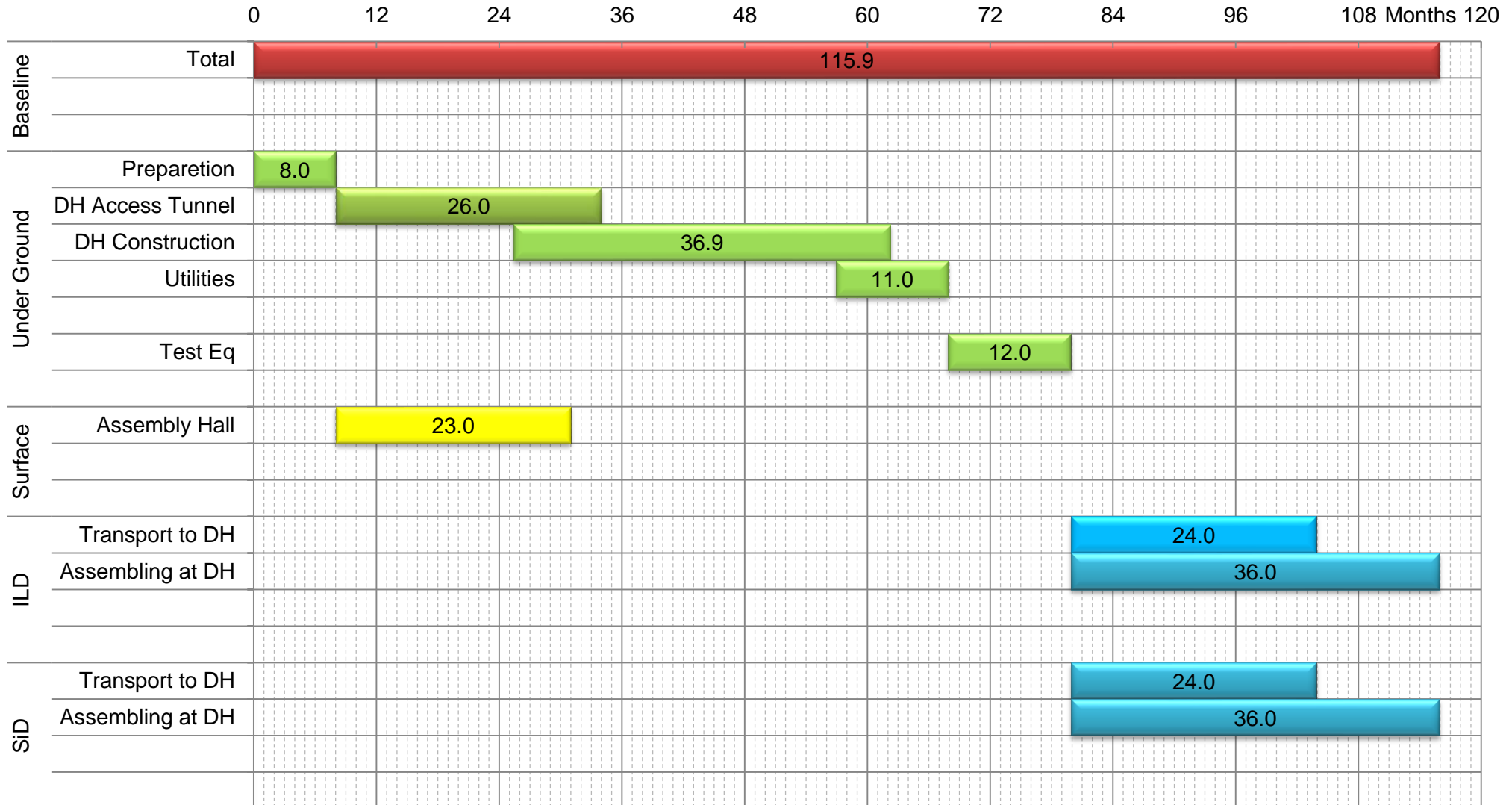
- Hybrid A' Design -

Time-line (const. period: 103.0 months)





Const. Schedule for the Baseline Design

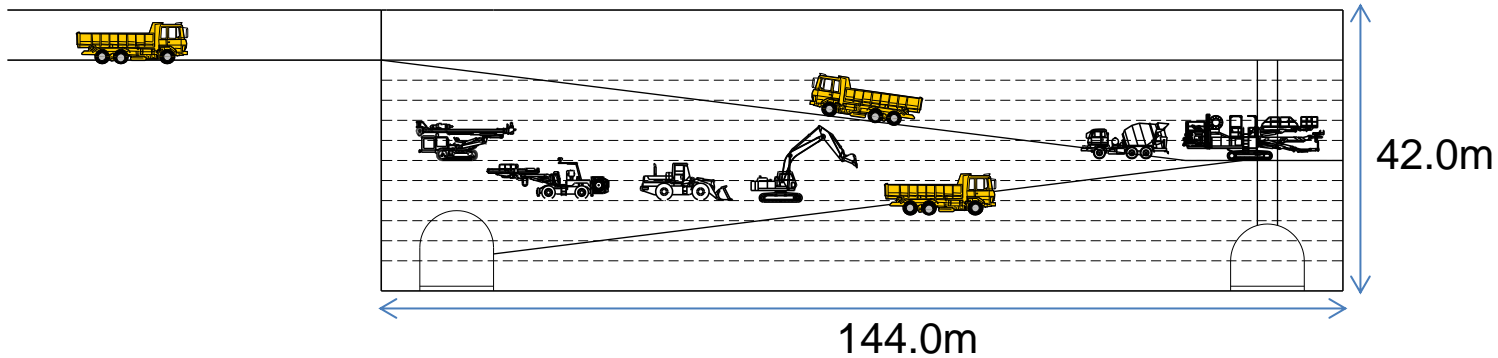




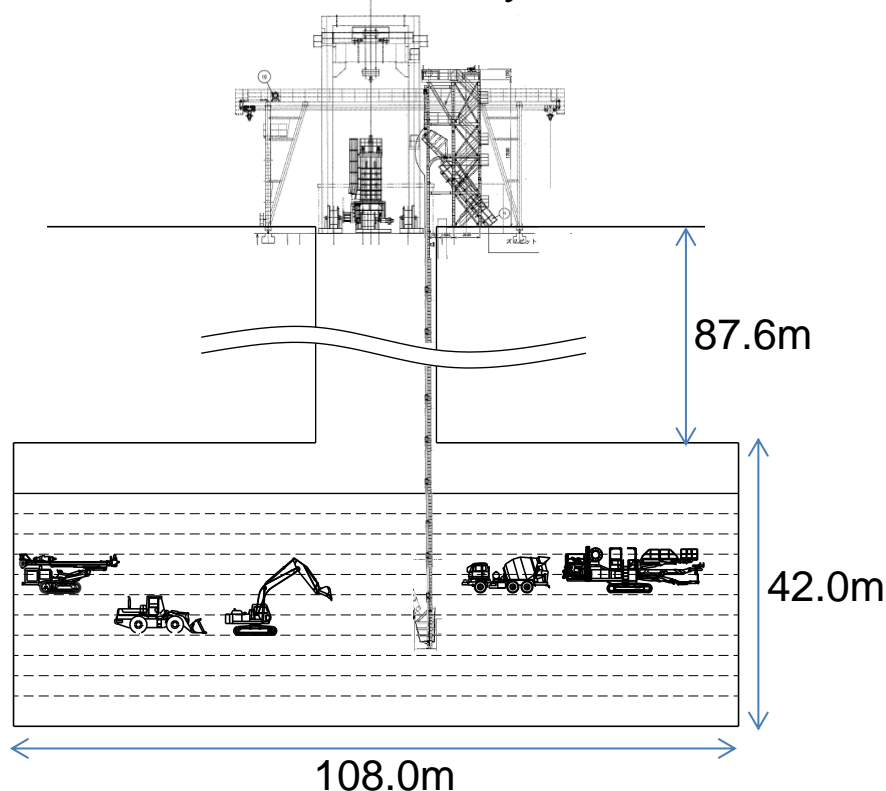
Const. Schedule for the Hybrid A' Design



Excavation Method for the Baseline



Excavation Method for the Hybrid-A'



<Equipment in Common>

- Backhoe
- Wheel Loader
- Jumbo
- Shotcrete Machine
- Crawler Drill

<Only for Base Line Design>

- Dump Truck

<Only for Hybrid-A' Design>

- Lifting Equipment

Assumption for the schedule

- **Preparation work :**
 - Land forming - 6 months + temporary work - 2 months
- **Access tunnel gradient (only for Baseline) : max. 10%**
- **D/H excavation commencement**
 - Baseline: After completion of upper A/T
 - Hybrid A': After completion of the main shaft (by using the main shaft)
- **Construction speed of tunnel and D/H: same as the TDR**
- **Construction speed of shafts (only for Hybrid A') : newly estimated**
- **Utility shaft (only for Hybrid A'): After completion of the utility cavern**
- **Detector platform installation**
 - After completion of the D/H floor concreting and utilities installation



Assumption for the schedule

- **Detector assembly**
- Baseline: to be assembled in the underground Detector Hall
- Hybrid A': to be assembled on the ground surface
 - ILD: to be assembled on the floor of the assembly hall (5 pieces)
 - SiD: to be assembled on the platform basically (only 1 piece will be assembled on the floor)
- Platform for the detector installation is to be made in the beginning of the assembly in parallel
 - Parallel work might be carried out in the assembly hall
 - For SiD, platform might be constructed during the detector assembling which will be assembled on the floor (not on the platform)



Issues

- **When are the surface platforms located in assembly hall installed? Parallel work is possible or not.**
- It's assumed that they will be made in the beginning of the detector assembly.
 - The detector assembly and platform construction is to be carried out in parallel.
 - 6 months was considered. It will not affect the detector assembling schedule because of the parallel work.
 - Otherwise, the platform installation period (6 months) might be affect the detector assembling schedule, or surface assembly yard might be increase in size for the platform assembly yard securing.
- Whether or not the environment affect the detector assembly, is not clear.
 - Therefore, we would like to consider the possibility of the steel construction applicability for the platforms (not reinforced concrete).